

CLAIMS

What we claim is:

1. A double stranded short interfering RNA (siRNA) molecule that comprises a first nucleotide sequence complementary to RNA sequence encoding HER2 or a portion thereof, and a second nucleotide sequence having complementarity to said first sequence, wherein said first sequence and said second sequence independently comprise from about 19 nucleotides to about 23 nucleotides, and wherein said siRNA includes at least one nucleotide that is not a 2'-OH containing ribonucleotide.
2. The siRNA molecule of claim 1, wherein said first sequence and said second sequence of said siRNA molecule each comprise about 21 nucleotides.
3. The siRNA molecule of claim 1, wherein said first sequence and said second sequence of said siRNA molecule each comprise about 19 nucleotides.
4. The siRNA molecule of claim 1, wherein said siRNA comprises a nucleotide overhang at the 3'-end, 5'-end, or both 3' and 5' ends of said siRNA.
5. The siRNA molecule of claim 1, wherein said siRNA does not comprise a nucleotide overhang.
6. The siRNA molecule of claim 1, wherein said siRNA molecule is chemically synthesized.
7. The siRNA molecule of claim 1, wherein said at least one nucleotide is a 2'-deoxy (2'-H) nucleotide.
8. The siRNA molecule of claim 1, wherein said at least one nucleotide is a 2'-deoxy-2'-fluoro (2'-F) nucleotide.
9. The siRNA molecule of claim 1, wherein said at least one nucleotide is a 2'-O-alkyl nucleotide.

10. The siRNA molecule of claim 9, wherein said 2'-O-alkyl nucleotide is a 2'-O-methyl nucleotide.
11. The siRNA molecule of claim 9, wherein said 2'-O-alkyl nucleotide is a 2'-O-allyl nucleotide.
12. The siRNA molecule of claim 1, wherein said siRNA molecule comprises at least one nucleic acid base modification.
13. The siRNA molecule of claim 1, wherein said siRNA molecule comprises at least one nucleic acid backbone modification.
14. The siRNA molecule of claim 1, wherein said siRNA molecule comprises at least one non-nucleotide.
15. The siRNA molecule of claim 14, wherein said non-nucleotide comprises an abasic moiety.
16. The siRNA molecule of claim 15, wherein said abasic moiety is present at the 3'-end, 5'-end, or both 3' and 5'-ends of said first and/or said second sequence.
17. A composition comprising the siRNA of claim 1 in a pharmaceutically acceptable carrier or diluent.